



Lotus 1-2-3 Release 3.1

Quick Reference

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How to Use *Quick Reference*

Quick Reference summarizes 1-2-3® keys, file types, label prefixes, arithmetic and logical operators, @functions, and macro commands. *Quick Reference* also contains the “Task Summary,” which describes common 1-2-3 tasks and lists the commands you use to complete them, and menu trees for the Data, File, Graph, Print, Range, and Worksheet commands.

While using *Quick Reference*, note the following:

- New or enhanced keys, file types, @functions, macro key names, and advanced macro commands are marked with a diamond.
- Tasks in the “Task Summary” that use new commands are marked with a diamond.
- New menu commands are highlighted on the menu trees.

Key Summary

The following tables list keys you use in 1-2-3 and the different modes you can use each key in.

Function Keys

Key	Mode	Action
ABS (F4)	EDIT, POINT, VALUE	Adjusts a cell or range reference between a relative, absolute, and mixed reference.
◆ ADDIN (ALT-F10)	READY	Displays a menu that lets you use available 1-2-3 Release 3.1 add-ins.
◆ APP 1 (ALT-F7)	READY	Starts an available 1-2-3 Release 3.1 add-in assigned to the key.
◆ APP 2 (ALT-F8)		
◆ APP 3 (ALT-F9)		
CALC (F9)	READY	Recalculates formulas.
	EDIT, VALUE	Converts a formula to its current value.
COMPOSE (ALT-F1)	EDIT, LABEL, READY, VALUE	Creates characters in 1-2-3 that do not appear on the keyboard.

(Continued)

Key	Mode	Action
EDIT (F2)	EDIT	Switches 1-2-3 between EDIT and LABEL or VALUE mode.
	LABEL, READY, VALUE	Puts 1-2-3 in EDIT mode so you can edit the entry in the current cell.
GOTO (F5)	READY	Moves directly to a specific cell, named range, worksheet, or active file.
GRAPH (F10)	All modes	Displays the current graph or creates an automatic graph using the data around the cell pointer.
HELP (F1)	All modes but HELP	Displays the 1-2-3 Help screens.
	HELP	Displays the first screen that appeared when you first pressed HELP (F1) .
◆ NAME (F3)	EDIT, FILES, NAMES, POINT, VALUE	Displays a list of names related to the command you selected or the entry you are creating. See "1-2-3 Function Keys" in Chapter 1 of <i>Reference</i> for more information on NAME (F3) .
QUERY (F7)	FIND, READY	Repeats the last Data Query command you selected or, during /Data Query Find, switches 1-2-3 between FIND mode and READY mode.
◆ RECORD (ALT-F2)	READY	Lets you use the contents of the record buffer or turn STEP mode on.
	STEP	Turns STEP mode off.
◆ RUN (ALT-F3)	READY	Selects a macro to run.
TABLE (F8)	MENU, READY	Repeats the last Data Table command you selected.
◆ UNDO (ALT-F4)	READY	When the undo feature is on, cancels any changes you made since 1-2-3 was last in READY mode.
WINDOW (F6)	LABEL, POINT, READY, VALUE	Moves between windows you create with /Worksheet Window.
◆ ZOOM (ALT-F6)	READY	Switches the current window between its original size and full-screen size.

Pointer-Movement Keys

Key	Mode	Action
→ or ←	EDIT	Moves right or left one character.
	FILES, HELP, MENU, NAMES	Moves right or left one item.
	LABEL, VALUE	Completes the entry and moves right or left one column.
	POINT, READY	Moves right or left one column.
↑ or ↓	EDIT	If the entry occupies one line in the control panel, completes the entry and moves up or down one cell; if the entry occupies more than one line in the control panel, moves one line up or down in the entry.
	FIND	Moves to previous or next record that meets criteria.
	FILES, HELP, NAMES	Moves up or down one item.
	LABEL, VALUE	Completes the entry and moves up or down one row.
	POINT, READY	Moves up or down one row.
BIG LEFT (CTRL-←) or BACKTAB (SHIFT-TAB)	EDIT	Moves left five characters.
	FILES, NAMES	Moves to first item in a line.
	LABEL, VALUE	Completes the entry and moves left one screen.
	POINT, READY	Moves left one screen.
BIG RIGHT (CTRL- →) or TAB	EDIT	Moves right five characters.
	FILES, NAMES	Moves to last item in a line.
	LABEL, VALUE	Completes the entry and moves right one screen.
	POINT, READY	Moves right one screen.
END	EDIT	Moves to the last character.
	FIND	Moves to the first record that meets criteria.

(Continued)

Key	Mode	Action
END	FILES, HELP, MENU, NAMES	Moves to the last item.
	LABEL, POINT, READY, VALUE	Completes an action when used with another pointer-movement key.
END → or END ←	LABEL, VALUE	Completes the entry and moves right or left in the current row, to the next cell in the row that contains data and adjoins a cell on either side that does not contain data.
	POINT, READY	Moves right or left in the current row, to the next cell in the row that contains data and adjoins a cell on either side that does not contain data.
END ↑ or END ↓	LABEL, VALUE	Completes the entry and moves up or down the current column, to the next cell in the column that contains data and adjoins a cell above or below that does not contain data.
	POINT, READY	Moves up or down the current column, to the next cell in the column that contains data and adjoins a cell above or below that does not contain data.
END HOME	LABEL, VALUE	Completes the entry and moves to the lower right corner of the active area of the worksheet.
	POINT, READY	Moves to the lower right corner of the active area of the worksheet.
HOME	EDIT	Moves to the first character.
	FIND	Moves to the first record that meets criteria.
	FILES, HELP, MENU, NAMES	Moves to the first item.
	LABEL, VALUE	Completes the entry and moves to A1 in the current worksheet unless column A is hidden or worksheet titles are set.
PGUP or PGDN	POINT, READY	Moves to A1 in the current worksheet unless column A is hidden or worksheet titles are set.
	EDIT, LABEL, VALUE	Completes the entry and moves up or down one screen.
	FILES, NAMES POINT, READY	Moves up or down one screen.

Moving Around Multiple-Sheet Files

Key	Mode	Action
◆ END NEXT SHEET (END CTRL-PGUP)	LABEL, VALUE	Completes the entry and moves back through worksheets in the current file to the next cell that contains data and adjoins a blank cell either in front of or behind it.
	POINT, READY	Moves back through worksheets in the current file to the next cell that contains data and adjoins a blank cell either in front of or behind it.
◆ END PREV SHEET (END CTRL-PGDN)	LABEL, VALUE	Completes the entry and moves forward through worksheets in the current file to the next cell that contains data and adjoins a blank cell either in front of or behind it.
	POINT, READY	Moves forward through worksheets in the current file to the next cell that contains data and adjoins a blank cell either in front of or behind it.
◆ FIRST CELL (CTRL-HOME)	EDIT, LABEL, VALUE	Completes the entry and moves to cell A:A1 in the current file unless worksheet A or column A is hidden, or worksheet titles are set.
	POINT, READY	Moves to cell A:A1 in the current file unless worksheet A or column A is hidden, or worksheet titles are set.
◆ LAST CELL (END CTRL-HOME)	EDIT, LABEL, VALUE	Completes the entry and moves to the last nonblank cell in the current file.
	POINT, READY	Moves to the last nonblank cell in the current file.
◆ NEXT SHEET (CTRL-PGUP)	EDIT, LABEL, VALUE	Completes the entry and moves to the next worksheet.
	POINT, READY	Moves to the next worksheet.
◆ PREV SHEET (CTRL-PGDN)	EDIT, LABEL, VALUE	Completes the entry and moves to the previous worksheet.
	POINT, READY	Moves to the previous worksheet.

Moving Between Active Files

Key	Mode	Action
◆ FIRST FILE (CTRL-END HOME)	EDIT, LABEL, VALUE	Completes the entry, then moves to the cell you last highlighted in the first active file.
	POINT, READY	Moves to the cell you last highlighted in the first active file.
◆ LAST FILE (CTRL-END END)	EDIT, LABEL, VALUE	Completes the entry, then moves to the cell you last highlighted in the last active file.
	POINT, READY	Moves to the cell you last highlighted in the last active file.
◆ NEXT FILE (CTRL-END CTRL-PGUP)	EDIT, LABEL, VALUE	Completes the entry, then moves to the cell you last highlighted in the next active file.
	POINT, READY	Moves to the cell you last highlighted in the next active file.
◆ PREV FILE (CTRL-END CTRL-PGDN)	EDIT, LABEL, VALUE	Completes the entry, then moves to the cell you last highlighted in the previous active file.
	POINT, READY	Moves to the cell you last highlighted in the previous active file.

Special Keys

Key	Mode	Action
ALT	All modes	Starts a macro when used in combination with a single-letter macro name.
BACKSPACE	EDIT, LABEL, VALUE	Erases the character to the left of the cursor.
	POINT	Returns the cell pointer to wherever it was before 1-2-3 entered POINT mode and if the range is anchored, removes the anchor.
	HELP	Displays the previous Help screen.
CTRL-BREAK	All modes	Cancels the current operation and returns 1-2-3 to READY mode.
DEL	EDIT, LABEL, VALUE	Erases the character above the cursor.
ENTER	All modes	Completes an entry, a selection, a command, or part of a command.
ESC	All modes	Cancels the current entry or range, or returns to the previous command step.

(Continued)

Key	Mode	Action
INS	EDIT, LABEL, VALUE	Switches between inserting the character to the left of the cursor and replacing the character above the cursor with the character you type.
NUM LOCK	All modes	Switches between numbers and pointer-movement keys on the numeric keypad.
SCROLL LOCK	All modes	Switches arrow keys between moving the cell pointer and moving the window.

File Types

1-2-3 automatically adds an extension appropriate to the type of file you are naming:

File type	Extension
◆ Backup	.BAK
◆ Encoded	.ENC
◆ Graph	.CGM or .PIC, depending on current /Worksheet Global Default Graph setting
◆ Temporary	.TMP
Text	.PRN
◆ Worksheet	.WK3, unless you specify another extension with /Worksheet Global Default Ext

Label Prefixes

Label prefixes determine how a label is aligned in a cell.

Prefix	Effect on label display
'	Aligns the label with the left edge of the cell (initial alignment for labels).
"	Aligns the label with the right edge of the cell.
^	Centers the label in the cell.
\	Repeats the label to fill the cell.
	When used as a label prefix for a label in the first column of a print range, tells 1-2-3 not to print that row of data. If, however, the label is located elsewhere in a row (such as between other labels), the label will be left-aligned and will print.

Arithmetic and Logical Operators

The following table shows the arithmetic, string, and logical operators you can use in formulas, and their order of precedence. **Precedence numbers** represent the order in which 1-2-3 performs operations in a formula. The lower the precedence number, the earlier 1-2-3 performs the operation. Operations with the same precedence number are performed sequentially from left to right.

Operator	Operation	Precedence number
^	Exponentiation	1
- +	Identification of value as negative or positive	2
* /	Multiplication and division	3
+ -	Addition and subtraction	4
= <>	Equal-to and not-equal-to tests	5
< >	Less-than and greater-than tests	5
<=	Less-than-or-equal-to test	5
>=	Greater-than-or-equal-to test	5
#NOT#	Logical-NOT test	6
#AND# #OR#	Logical-AND and logical-OR tests	7
&	String concatenation	7

@Functions

NOTE Arguments in [] (brackets) are optional.

Database @Functions

@DAVG(*input,field,criteria*) averages the values in a field of a database table, based on certain criteria.

@DCOUNT(*input,field,criteria*) counts the nonblank cells in a field of a database table, based on certain criteria.

- ◆ @DGET(*input,field,criteria*) extracts a value or label from a field of a database table, based on certain criteria.

@DMAX(*input,field,criteria*) finds the largest value in a field of a database table, based on certain criteria.

@DMIN(*input,field,criteria*) finds the smallest value in a field of a database table, based on certain criteria.

- ◆ @DQUERY(*function,ext-arguments*) sends a command to an external database management program.

@DSTD(*input,field,criteria*) calculates the population standard deviation of the values in a field of a database table, based on certain criteria.

- ◆ @DSTDS(*input,field,criteria*) calculates the sample standard deviation of values in a field of a database table, based on certain criteria.

@DSUM(*input,field,criteria*) adds the values in a field of a database table, based on certain criteria.

@DVAR(*input,field,criteria*) calculates the population variance of the values in a field of a database table, based on certain criteria.

- ◆ @DVARs(*input,field,criteria*) calculates the sample variance of values in a field of a database table, based on certain criteria.

Date and Time @Functions

@DATE(*year,month,day*) calculates the date number for *year*, *month*, and *day*.

@DATEVALUE(*string*) calculates the date number for a *string* that looks like a date.

@DAY(*date-number*) calculates the day of the month, an integer from 1 to 31, in *date-number*.

- ◆ @D360(*start-date,end-date*) calculates the number of days between two date numbers, based on a 360-day year (12 months, each with 30 days).

@HOUR(*time-number*) calculates the hour, an integer from 0 to 23, in *time-number*.

@MINUTE(*time-number*) calculates the minutes, an integer from 0 to 59, in *time-number*.

@MONTH(*date-number*) calculates the month, an integer from 1 to 12, in *date-number*.

@NOW calculates the date and time number that corresponds to the current date and time on the computer's clock.

@SECOND(*time-number*) calculates the seconds, an integer from 0 to 59, in *time-number*.

@TIME(*hour,minutes,seconds*) calculates the time number for *hour*, *minutes*, and *seconds*.

@TIMEVALUE(*string*) calculates the time number for a *string* that looks like a time.

@TODAY calculates the date number that corresponds to the current date on the computer's clock.

@YEAR(*date-number*) calculates the year, an integer from 0 (1900) to 199 (2099), in *date-number*.

Financial @Functions

@CTERM(*interest,future-value,present-value*) calculates the number of compounding periods it takes for an investment (*present-value*) to grow to a *future-value*, earning a fixed *interest* rate per compounding period.

@DDB(*cost,salvage,life,period*) calculates the depreciation allowance of an asset for a specified *period*, using the double-declining balance method.

@FV(*payments,interest,term*) calculates the future value of an investment, based on a series of equal *payments*, earning a periodic *interest* rate, over the number of payment periods in *term*.

@IRR(*guess,range*) calculates the internal rate of return expected from a series of cash flows generated by an investment.

@NPV(*interest,range*) calculates the net present value of a series of future cash flows discounted at a fixed, periodic *interest* rate.

@PMT(*principal,interest,term*) calculates the amount of the periodic payment needed to pay off a loan, given a specified periodic *interest* rate and number of payment periods.

@PV(*payments,interest,term*) calculates the present value of an investment.

@RATE(*future-value,present-value,term*) calculates the periodic interest rate necessary for an investment (*present-value*) to grow to a *future-value* over the number of compounding periods in *term*.

@SLN(*cost,salvage,life*) calculates the straight-line depreciation allowance of an asset for one period.

@SYD(*cost,salvage,life,period*) calculates the sum-of-the-years' digits depreciation allowance of an asset for a specified *period*.

@TERM(*payments,interest,future-value*) calculates the number of payment periods in the term of an investment necessary to accumulate a *future-value*, assuming *payments* of equal value, when the investment earns a periodic *interest* rate.

- ◆ @VDB(*cost,salvage,life,start-period,end-period,[depreciation-factor],[switch]*) calculates the depreciation allowance of an asset for a length of time specified by *start-period* and *end-period*. @VDB uses the double-declining balance method if no optional arguments are entered. An optional *depreciation-factor* argument lets you calculate depreciation for rates other than double-declining balance. An optional *switch* argument can make @VDB never switch to an ongoing straight-line depreciation calculation, even when that depreciation is greater than the declining-balance calculation.

Logical @Functions

@FALSE returns the logical value 0 (false).

@IF(*condition,x,y*) evaluates *condition* as true or false and takes one of two actions, depending on the result of the evaluation. If *condition* is true, @IF returns *x*. If *condition* is false, @IF returns *y*.

@ISERR(*x*) tests *x* for the value ERR. If *x* is the value ERR, @ISERR returns 1 (true); if *x* is not the value ERR, @ISERR returns 0 (false).

@ISNA(*x*) tests *x* for the value NA. If *x* is the value NA, @ISNA returns 1 (true); if *x* is not the value NA, @ISNA returns 0 (false).

@ISNUMBER(*x*) tests *x* for a value. If *x* is a number, the value ERR, the value NA, or a blank cell, @ISNUMBER returns 1 (true); if *x* is a string, @ISNUMBER returns 0 (false).

- ◆ @ISRANGE(*range*) tests *range* for a defined range name or valid range address. If *range* is a defined range name or valid range address, @ISRANGE returns 1 (true); if *range* is not a defined range name or valid range address, @ISRANGE returns 0 (false).

@ISSTRING(*x*) tests *x* for a string. If *x* is a literal string or reference to a cell that contains a label, @ISSTRING returns 1 (true); if *x* is a number, the value ERR, the value NA, or a blank cell, @ISSTRING returns 0 (false).

@TRUE returns the logical value 1 (true).

Mathematical @Functions

@ABS(x) calculates the absolute (positive) value of x .

@ACOS(x) calculates the arc cosine of x .

@ASIN(x) calculates the arc sine of x .

@ATAN(x) calculates the arc tangent of x .

@ATAN2(x,y) calculates the four-quadrant arc tangent of y/x .

@COS(x) calculates the cosine of angle x .

@EXP(x) calculates the value of e (approximately 2.718282) raised to the power x .

@INT(x) calculates the integer portion of x , without rounding the value.

@LN(x) calculates the natural logarithm (base e) of x .

@LOG(x) calculates the common logarithm (base 10) of x .

@MOD(x,y) calculates the remainder (modulus) of x/y .

@PI returns the value π (calculated at 3.14159265358979324).

@RAND generates a random number between 0 and 1.

@ROUND(x,n) rounds the number x to n places.

@SIN(x) calculates the sine of angle x .

@SQRT(x) calculates the positive square root of x .

@TAN(x) calculates the tangent of angle x .

Special @Functions

@@(location) returns the contents of the cell whose name or address is specified in *location*.

@CELL(attribute,location) returns information about an *attribute* for the first cell in *location*.

@CELLPOINTER(attribute) returns information about an *attribute* for the current cell.

@CHOOSE(offset,list) returns the value or string in *list* that is specified by *offset*.

@COLS(range) counts the columns in *range*.

- ◆ @COORD(worksheet,column,row,absolute) creates a cell address from values that correspond to *worksheet*, *column*, and *row*; the address is absolute, relative, or mixed, depending on the value in *absolute*.

@ERR returns the value ERR (error).

@HLOOKUP(*x,range,row-offset*) returns the contents of a cell in a specified row of a horizontal lookup table.

- ◆ @INDEX(*range,column-offset,row-offset,[worksheet-offset]*) finds the contents of the cell located at a specified *column-offset*, *row-offset*, and *worksheet-offset* of *range*.

@INFO(*attribute*) returns system information for the current session.

@NA returns the value NA (not available).

@ROWS(*range*) counts the rows in *range*.

- ◆ @SHEETS(*range*) counts the worksheets in *range*.

@VLOOKUP(*x,range,column-offset*) returns the contents of a cell in a specified column of a vertical lookup table.

Statistical @Functions

@AVG(*list*) averages the values in *list*.

@COUNT(*list*) counts the nonblank cells in a *list* of ranges.

@MAX(*list*) finds the largest value in *list*.

@MIN(*list*) finds the smallest value in *list*.

@STD(*list*) calculates the population standard deviation of the values in *list*.

- ◆ @STDS(*list*) calculates the sample standard deviation of the values in *list*.

@SUM(*list*) adds the values in *list*.

- ◆ @SUMPRODUCT(*list*) multiplies the values in corresponding cells in multiple ranges and sums the products.

@VAR(*list*) calculates the population variance of the values in *list*.

- ◆ @VARS(*list*) calculates the sample variance of the values in *list*.

String @Functions

@CHAR(*x*) returns the character that the LMBCS code *x* produces.

@CODE(*string*) returns the LMBCS code for the first character in *string*.

@EXACT(*string1,string2*) returns 1 (true) if *string1* and *string2* are the same or 0 (false) if they are not the same.

@FIND(*search-string,string,start-number*) calculates the position in *string*, beginning with *start-number*, at which 1-2-3 finds the first occurrence of *search-string*.

@LEFT(*string,n*) returns the first *n* characters in *string*.

@LENGTH(*string*) counts the characters in *string*.

@LOWER(*string*) converts all the letters in *string* to lowercase.

@MID(*string,start-number,n*) returns *n* characters in *string*, beginning with the character at *start-number*.

@N(*range*) returns the entry in the first cell in *range* as a value. If the cell contains a value, @N returns that value; if the cell contains a label, @N returns the value 0.

@PROPER(*string*) converts the letters in *string* to proper capitalization: the first letter of each word uppercase and the remaining letters lowercase.

@REPEAT(*string,n*) duplicates *string* *n* times.

@REPLACE(*original-string,start-number,n,new-string*) replaces *n* characters in *original-string*, beginning at *start-number*, with *new-string*.

@RIGHT(*string,n*) returns last *n* characters in *string*.

@S(*range*) returns the entry in the first cell in *range* as a label. If the cell contains a label, @S returns that label; if the cell contains a value, @S returns an empty string.

@STRING(*x,n*) converts a number (*x*) into a string with *n* decimal places.

@TRIM(*string*) returns *string* with no leading, trailing, or consecutive spaces.

@UPPER(*string*) converts all the letters in *string* to uppercase.

@VALUE(*string*) converts a number entered as a *string* into its corresponding numeric value.

Macros

Macro Names for Special Keys

1-2-3 key	Macro key name
↓	{DOWN} or {D}
↑	{UP} or {U}
←	{LEFT} or {L}
→	{RIGHT} or {R}
ABS (F4)	{ABS}
◆ ADDIN (ALT-F10)	{ADDIN} or {APP4}
◆ APP1 (ALT-F7)	{APP1}
◆ APP2 (ALT-F8)	{APP2}
◆ APP3 (ALT-F9)	{APP3}
BACKSPACE	{BACKSPACE} or {BS}
BIG LEFT (CTRL-←) or BACKTAB (SHIFT-TAB)	{BIGLEFT}
BIG RIGHT (CTRL-→) or TAB	{BIGRIGHT}
CALC (F9)	{CALC}
◆ No corresponding key	{CLEARENTRY} or {CE}
DEL	{DELETE} or {DEL}
EDIT (F2)	{EDIT}
END	{END}
ENTER	~ (tilde)
ESC	{ESCAPE} or {ESC}
◆ FILE (CTRL-END)	{FILE}
◆ FIRST CELL (CTRL-HOME)	{FIRSTCELL} or {FC}
◆ FIRST FILE (CTRL-END HOME)	{FIRSTFILE}, {FF}, or {FILE}{HOME}
GOTO (F5)	{GOTO}
GRAPH (F10)	{GRAPH}
HELP (F1)	{HELP}
HOME	{HOME}
INS	{INSERT} or {INS}
◆ LAST CELL (END CTRL-HOME)	{LASTCELL} or {LC}
◆ LAST FILE (CTRL-END END)	{LASTFILE}, {LF}, or {FILE}{END}
NAME (F3)	{NAME}

(Continued)

1-2-3 key	Macro key name
◆ NEXT FILE (CTRL-END CTRL-PGUP)	{NEXTFILE}, {NF}, or {FILE}{NS}
◆ NEXT SHEET (CTRL-PGUP PGUP PGDN)	{NEXTSHEET} or {NS} {PGUP} {PGDN}
◆ PREV FILE (CTRL-END CTRL-PGDN)	{PREVFILE}, {PF}, or {FILE}{PS}
◆ PREV SHEET (CTRL-PGDN QUERY (F7) TABLE (F8) WINDOW (F6))	{PREVSHEET} or {PS} {QUERY} {TABLE} {WINDOW}
◆ ZOOM (ALT-F6) / (slash) or < (less-than symbol) ~ (tilde) { (open brace) } (close brace)	{ZOOM} /, <, or {MENU} {~} { { } { } }

1-2-3 does not have macro key names for the following keys: CAPS LOCK, COMPOSE (ALT-F1), NUM LOCK, PRINT SCREEN, RECORD (ALT-F2), RUN (ALT-F3), SCROLL LOCK, SHIFT, and UNDO (ALT-F4).

Advanced Macro Command Summary

NOTE Arguments in [] (brackets) are optional. For arguments that are not italicized, you must include that word as the argument in the command.

{*subroutine* [*arg1*],[*arg2*],...[*argn*]} performs a subroutine call.

{?} suspends macro execution, to let you move the cell pointer or menu pointer, complete part of a command, or enter data for the macro to process.

◆ {APPENDBELOW *target-location,source-location*} copies the contents of *source-location* to the rows immediately below *target-location*.

◆ {APPENDRIGHT *target-location,source-location*} copies the contents of *source-location* to the columns immediately to the right of *target-location*.

◆ {BEEP [*tone-number*]} sounds the computer's bell.

{BLANK *location*} erases the contents of *location*.

{BRANCH *location*} transfers macro control from the current column of macro instructions to *location* for further macro instructions.

◆ {BREAK} returns 1-2-3 to READY mode during data entry or selection of a 1-2-3 command.

{BREAKOFF} disables CTRL-BREAK during a macro.

{BREAKON} restores use of CTRL-BREAK after a {BREAKOFF} command.

{CLOSE} closes a text file, if one is open.

{CONTENTS *target-location,source-location,[width],[cell-format]*} copies the contents of *source-location* to *target-location* as a label.

{DEFINE *location1,location2,...locationn*} stores arguments passed to a subroutine in a {*subroutine*} command so those arguments can be used later in the subroutine.

{DISPATCH *location*} performs an indirect branch by transferring macro control to the cell whose name or address is entered in *location*.

{FILESIZE *location*} determines the number of bytes in the open text file and enters the number in *location*.

{FOR *counter,start-number,stop-number,step-number,subroutine*} creates a for loop — it repeatedly performs a subroutine call to *subroutine*.

{FORBREAK} ends a for loop created by a {FOR} command.

◆ {FORM *input-location,[call-table],[include-list],[exclude-list]*} suspends a macro temporarily so you can enter and edit data in the unprotected cells in *input-location*.

◆ {FORMBREAK} ends a {FORM} command.

◆ {FRAMEOFF} suppresses display of the worksheet frame (worksheet letter, column letters, and row numbers).

◆ {FRAMEON} redisplay the worksheet frame (worksheet letter, column letters, and row numbers).

{GET *location*} suspends macro execution until you press a key, then records your keystroke as a label in *location*.

{GETLABEL *prompt,location*} displays *prompt* in the control panel, waits for you to enter a response, and stores whatever you entered as a label in *location*.

{GETNUMBER *prompt,location*} displays *prompt* in the control panel, waits for you to enter a response, and stores whatever you entered as a number in *location*.

{GETPOS *location*} determines the current byte-pointer position in the open text file and enters it as a number in *location*.

◆ {GRAPHOFF} removes from the screen a graph displayed by a {GRAPHON} command and redisplay the worksheet.

◆ {GRAPHON [*named-graph*],[*nodisplay*]} does one of the following, depending on the arguments used: displays the current graph; makes the *named-graph* the current graph and displays *named-graph*; makes the *named-graph* the current graph without displaying the graph.

{IF *condition*} evaluates *condition* as true or false. If *condition* is true, 1-2-3 continues to the macro instruction immediately following the {IF} command. If *condition* is false,

1-2-3 goes immediately to the next cell in the column, skipping any further instructions in the same cell as the {IF} command.

{INDICATE *[string]*} displays *string* as the mode indicator.

{LET *location,entry*} enters a number or left-aligned label in *location*.

{LOOK *location*} enters the first keystroke you made during noninteractive parts of a macro as a left-aligned label in *location*.

{MENUBRANCH *location*} displays in the control panel the macro menu found at *location*, waits for you to select an item from the menu, and then branches to the macro instructions associated with that menu item.

{MENUCALL *location*} displays in the control panel the macro menu found at *location*, waits for you to select an item from the menu, and then performs a subroutine call to the macro instructions associated with that menu item.

{ONERROR *branch-location,[message-location]*} traps and handles errors that occur while a macro is running and continues macro execution at *branch-location*.

{OPEN *file-name,access-type*} opens a text file for read-only processing or for read-and-write processing, depending on the type of access you specify.

- ◆ {PANELOFF [*clear*]} freezes the control panel and status line, optionally clearing the control panel and status line's current contents.

{PANELON} unfreezes the control panel and status line after a {PANELOFF} command.

{PUT *location,column-offset,row-offset,entry*} enters a number or left-aligned label in a cell within *location*.

{QUIT} ends a macro immediately, returning keyboard control to the user.

{READ *byte-count,location*} starts at the current byte-pointer position in the open text file, copies a specified number of bytes (*byte-count*) to *location*, and advances the byte pointer *byte-count* bytes.

{READLN *location*} starts at the current byte-pointer position in the open text file, copies the remainder of the current line to *location*, and advances the byte pointer to the beginning of the next line in the file.

{RECALC *location,[condition],[iterations]*} recalculates the values in *location*, proceeding row by row for the specified number of *iterations* or until *condition* is met.

{RECALCCOL *location,[condition],[iterations]*} recalculates the values in *location*, proceeding column by column for the specified number of *iterations* or until *condition* is met.

{RESTART} is used in subroutines to clear the subroutine stack.

{RETURN} affects flow of control in subroutines. In a subroutine called by *{subroutine}* or {MENUCALL}, {RETURN} immediately returns macro control from the subroutine to the location from which the *{subroutine}* or {MENUCALL} command was issued. In

a subroutine called by a {FOR} command, {RETURN} ends the current iteration of the subroutine and immediately starts the next iteration.

{SETPOS *offset-number*} positions the byte pointer in the open text file *offset-number* bytes from the first byte in the file.

- ◆ {SYSTEM *command*} temporarily suspends the 1-2-3 session and executes the specified operating system command.

{WAIT *time-number*} suspends macro execution and displays WAIT as the mode indicator until the time specified by *time-number*.

{WINDOWSOFF} freezes the worksheet area of the screen during a macro.

{WINDOWSON} restores normal updating of the worksheet area after a {WINDOWSOFF} command.

{WRITE *string*} copies *string* to the open text file, starting at the current byte-pointer position.

{WRITELN *string*} copies *string* and an end-of-line sequence to the open text file, starting at the current byte-pointer position.

The /X Commands

/X command	Function	Corresponding advanced macro command
<i>/XC</i> <i>location</i> ~	Calls the subroutine at <i>location</i> .	{ <i>subroutine</i> }
<i>/XG</i> <i>location</i> ~	Branches to <i>location</i> .	{BRANCH}
<i>/XI</i> <i>condition</i> ~...	If <i>condition</i> is true, performs the next instruction in the same cell. Otherwise, skips to the next cell for further instructions.	{IF}
<i>/XL</i> <i>prompt</i> ~ [<i>location</i>]~	Displays <i>prompt</i> in the control panel. Enters response as a label in <i>location</i> .	{GETLABEL}
<i>/XM</i> <i>location</i> ~	Activates the macro menu stored at <i>location</i> .	{MENUBRANCH}
<i>/XN</i> <i>prompt</i> ~ [<i>location</i>]~	Displays <i>prompt</i> in the control panel. Enters response as a number in <i>location</i> .	{GETNUMBER}
<i>/XQ</i>	Ends the macro.	{QUIT}
<i>/XR</i>	Returns control from the current subroutine to the main macro, or ends the current loop through the subroutine and starts the next loop.	{RETURN}

Task Summary

This summary describes 1-2-3 tasks and lists the commands you use to complete them. It is organized by category, with the tasks listed alphabetically on the left and the 1-2-3 commands you use to accomplish the tasks, or a reference to a specific part of the 1-2-3 documentation, on the right. Use this summary to help you identify a specific command for completing a task, and then refer to the description of the command in Chapter 2 of *Reference* for specific procedures.

Although this summary includes many tasks you can accomplish using 1-2-3 commands, it is not a comprehensive list of commands. The 1-2-3 menu trees, included at the end of *Quick Reference*, provide a graphic representation of all the 1-2-3 commands.

The information in this summary is divided among the following sections:

- Annotating Data
- Controlling Worksheet Appearance
- Converting Formulas to Values
- Copying Data
- Data Analysis
- Database Tables
- Defining and Using Ranges
- Editing Data
- Entering Labels, Numbers, and Formulas
- Erasing Data
- Fixing Mistakes
- Graphing Data
- Listing Information
- Moving Data and the Cell Pointer
- Printing Data and Graphs
- Protecting Data and Files
- Returning 1-2-3 to the Operating System
- Using Files
- Using Macros

Annotating Data

- ◆ Attach notes to formulas or values See "Working with Formulas" in Chapter 1 of *Reference*
 - ◆ Create, list, and delete notes for range names /Range Name Note
-

Controlling Worksheet Appearance

When you turn GROUP mode on with /Worksheet Global Group Enable, any changes you make to cell formats and settings in the current worksheet affect the corresponding area of every worksheet in the current file. The following commands work in GROUP mode: /Range Format; /Range Label; /Range Prot; /Range Unprot; /Worksheet Column; /Worksheet Global Col-Width, Format, Label, Prot, and Zero; and /Worksheet Titles.

Worksheet Global Format commands and Range Format commands provide the same formatting options. /Worksheet Global Format affects an entire worksheet. /Range Format affects the area (range) you choose and overrides /Worksheet Global Format.

Changing Text Display

- Rearrange a column of labels to fit in a specified range /Range Justify
- Reset the label alignment (left, right, or center) in a range after you enter labels /Range Label
- Set the label alignment (left, right, or center) for the current worksheet before you enter labels /Worksheet Global Label

Controlling Columns, Rows, and Worksheets

- Change the width of all columns in a worksheet /Worksheet Global Col-Width
- Change the width of one column or a range of columns /Worksheet Column
- Fix rows or columns so they remain in view when you scroll through a worksheet /Worksheet Titles
- ◆ Insert blank columns, rows, and worksheets in the current file /Worksheet Insert
- ◆ Remove columns, rows, and worksheets from the current file /Worksheet Delete

Displaying Numbers and Formulas in Different Formats

Control how 1-2-3 displays data	/Worksheet Global Format /Range Format
Display actual formulas, not the results	/Worksheet Global Format Text /Range Format Text
◆ Display blank cells or a label instead of zeros	/Worksheet Global Zero
◆ Display negative values in a different color (color monitors) or intensity (monochrome monitors)	/Worksheet Global Format Other Color /Range Format Other Color
◆ Format cells to display numbers automatically in Date, Time, Percent, Fixed, Sci (Scientific), Currency, or , (Comma) format	/Worksheet Global Format Other Automatic /Range Format Other Automatic
Reset a range to the global cell format	/Range Format Reset
◆ Set formats for international currency, date, and time	/Worksheet Global Default Other International
Widen a column to display values instead of asterisks	/Worksheet Column Set-Width

Hiding Data

Hide or redisplay columns	/Worksheet Column
Hide or redisplay ranges	/Range Format Hidden and /Range Format Reset
◆ Hide or redisplay values equal to zero	/Worksheet Global Zero
◆ Hide or redisplay worksheets	/Worksheet Hide

Using Windows

Display different parts of a worksheet or file by splitting the screen into two windows	/Worksheet Window Horizontal or Vertical
◆ Display three consecutive worksheets at once	/Worksheet Window Perspective
Synchronize and unsynchronize window scrolling	/Worksheet Window Sync or Unsync
◆ View data in the worksheet by displaying symbols for labels, numbers, and formulas	/Worksheet Window Map
◆ View the current graph in a window to the right of the current worksheet	/Worksheet Window Graph

Converting Formulas to Values

Convert a range of formulas to values	/Range Value
Convert the formula in the current cell to a value	Press EDIT (F2) then CALC (F9) then ENTER
Copy a range, switching columns, rows, or worksheets and converting all formulas to values	/Range Trans
Save a range from the current file in a new file, converting formulas to values in the new file	/File Xtract Values

Copying Data

Copy a range, switching columns, rows, or worksheets and converting all formulas to values	/Range Trans
Copy data from one worksheet or file to another worksheet or file	/Copy

Data Analysis

Create a frequency distribution of values in a range	/Data Distribution
Invert a matrix formed by rows and columns of data	/Data Matrix Invert
Multiply two matrices	/Data Matrix Multiply
◆ Perform customized what-if analysis and enter results in a table	/Data Table Labeled
Perform linear regression analysis (calculate the relationships between independent and dependent variables)	/Data Regression
◆ Perform what-if analysis or cross-tabulate information and enter the results in a table	/Data Table 1, 2, or 3

Editing Data

- | | |
|---|--|
| Edit data in one cell | Press EDIT (F2)
See "Entering Data" in Chapter 1 of <i>Reference</i> |
| ◆ Find and replace text in formulas or labels in the current file | /Range Search |
-

Entering Labels, Numbers, and Formulas

- | | |
|---|---|
| Enter a character that is not on the keyboard | See "Displaying Characters" in Appendix 2 of <i>Reference</i> |
| ◆ Enter a sequence of numbers, dates, or times | /Data Fill |
| Enter formulas | See "Working with Formulas" in Chapter 1 of <i>Reference</i> |
| ◆ Enter formulas that link to data in other files | See "Linking Files with Formulas" in Chapter 1 of <i>Reference</i> |
| Enter labels and numbers in a worksheet | See "Entering Data" in Chapter 1 of <i>Reference</i> |
| ◆ Enter numbers as labels | /Range Format Other Label
Type a label prefix before a number and press ENTER |
-

Erasing Data

- | | |
|--|------------------------|
| Erase data in one or more cells | /Range Erase |
| ◆ Remove all active worksheets and files from memory and replace them with one blank worksheet | /Worksheet Erase Yes |
| ◆ Remove one file from memory | /Worksheet Delete File |
| ◆ Remove one or more columns, rows, or worksheets from the current file | /Worksheet Delete |
-

Fixing Mistakes

Edit data in one cell	Press EDIT (F2) See "Entering Data" in Chapter 1 of <i>Reference</i>
Erase data	/Range Erase
List error messages, causes, and possible solutions	Press HELP (F1) and select Error Message Index from the Help Index
Locate a circular reference in a file	/Worksheet Status
◆ Use undo to cancel a mistake in the worksheet	Press UNDO (ALT-F4) See Appendix 8 of <i>Reference</i>

Graphing Data

Creating Graphs

◆ Clear some or all of the current graph settings	/Graph Reset
◆ Create a graph by assigning all data ranges at once when data is located in consecutive columns or rows	/Graph Group
Create a graph by selecting individual data ranges	See "Creating a Graph" in "Graph Commands" in Chapter 2 of <i>Reference</i>
◆ Create a second y-axis	/Graph Type Features 2Y-Ranges
Select color or black and white for displaying and printing graphs	/Graph Options Color or B&W
Select the kind of graph you want to display or print	/Graph Type
◆ Set whether 1-2-3 uses rows or columns to create automatic graphs	/Worksheet Global Default Graph Columnwise or Rowwise

Displaying Graphs

Display a named graph on the full screen	/Graph Name Use
◆ Display the current graph in a graph window to the right of the current worksheet	/Worksheet Window Graph
Display the current graph on the full screen	/Graph View or press GRAPH (F10)

Enhancing Graphs

Add horizontal and/or vertical grid lines

- ◆ Change the way 1-2-3 displays numbers along an axis
 - ◆ Graph data ranges as a percentage of the total value in line, bar, mixed, stacked bar, and XY graphs
 - ◆ Hide a pie slice in a pie chart
 - ◆ Remove the percent labels from a pie chart
 - ◆ Rotate the x-axis 90° so it is vertical rather than horizontal
 - ◆ Select the colors or hatch patterns for the data in a graph
- Separate one or more slices in a pie chart

Set the appearance of lines in line, mixed, HLCO, and XY graphs

Set the axis scaling

- ◆ Set the colors or hatch pattern of each slice in a pie chart
- ◆ Stack the values in the data ranges in line, bar, and mixed graphs

Labeling Data in Graphs

- ◆ Add graph titles, axis titles, and notes
- Add text below a graph to label the data ranges represented by each symbol, color, or hatch pattern
- Create labels for the x-axis in line, bar, stacked bar, mixed, and HLCO graphs or label the slices in a pie chart
- Label the points or bars in a graph
- ◆ Set font, size, and color of text in a graph

/Graph Options Grid

/Graph Options Scale [Y-Scale, X-Scale, 2Y-Scale] Format

/Graph Type Features 100%

/Graph Type Pie and /Graph B with a negative number in the B data range

/Graph Type Pie and /Graph C with the C data range containing zero

/Graph Type Features Vertical

/Graph Options Advanced Colors or Hatches

/Graph Type Pie and /Graph B with values equal to or greater than 100 in the B data range

/Graph Options Format

/Graph Options Scale

/Graph Type Pie and /Graph B with the B data range containing 1 to 16 (for colors) if the display is set to color or 1 to 14 (for hatch patterns) if the display is set to black and white

/Graph Type Features Stacked

/Graph Options Titles

/Graph Options Legend

/Graph X

/Graph Options Data-Labels

/Graph Options Advanced Text

Set the number of labels displayed along the x-axis

/Graph Options Scale Skip

Saving Graphs

Name a graph and save it with a file so you can view the graph again when you use the file

/Graph Name Create and then /File Save

Save a graph in a graph file for use with other programs

/Graph Save

- ◆ Set the type of graph file (graphic metafile or picture) 1-2-3 creates when you use /Graph Save

/Worksheet Global Default Graph

Listing Information

- ◆ Display a list of active files, files on disk, or files linked to the current file
- ◆ Display a list of advanced macro commands and enter a command in a macro
- ◆ Display a list of file, graph, range, or print settings names when 1-2-3 is in the middle of a command
- ◆ Display a list of @functions and enter an @function in a formula

/File List

Type {, press NAME (F3) twice, highlight a macro command, and press ENTER

Press NAME (F3) after selecting any command that lists names of files, graphs, ranges, or print settings

Type @, press NAME (F3) twice, highlight an @function, and press ENTER

Display a list of range names

Press GOTO (F5) once and press NAME (F3)

Display global default settings

/Worksheet Global Default Status

Display information about memory use, hardware, and global settings

/Worksheet Status

In the current worksheet, list defined range names

/Range Name Table

- ◆ In the current worksheet, list information about active files, files on disk, or files linked to active files

/File Admin Table

- ◆ In the current worksheet, list named graphs

/Graph Name Table

- ◆ In the current worksheet, list named print settings /Print [E,F,P] Options Name Table
 - ◆ In the current worksheet, list notes attached to range names /Range Name Note Table
-

Moving Data and the Cell Pointer

- Move data within the same file /Move
 - ◆ Move the cell pointer between active files See "Working with Multiple Files" in Chapter 1 of *Reference*
 - ◆ Move the cell pointer between worksheets in a file See "Using Multiple-Sheet Files" in Chapter 1 of *Reference*
 - Move the cell pointer within a worksheet See "The 1-2-3 Screen" in Chapter 1 of *Reference*
-

Printing Data and Graphs

You must select a printer when you install 1-2-3 in order to print worksheet data or graphs. See Chapter 3 of *Setting Up 1-2-3* for information on selecting a printer.

NOTE /Print [E,F,P] means /Print [Encoded, File, Printer] for the Print commands listed below.

Selecting Data and Graphs for Printing

- ◆ Select a graph you want to print /Print [E,P] Image
- Select a range of data you want to print /Print [E,F,P] Range
- ◆ Select nonadjacent columns and rows to print one after the other /Print [E,F,P] Range and enter each range separated by a comma
- ◆ Select text and a named graph you want to print on the same page /Print [E,P] Range and enter the range for text, a comma, an asterisk, and then the graph name

Selecting Options for Printing Data and Graphs

- ◆ Advance the paper one line or insert one blank line in a text or encoded file /Print [E,F,P] Line
- ◆ Advance the paper to the next page or insert blank lines in a text or encoded file /Print [E,F,P] Page

- ◆ Control margins, borders, page length, headers, footers, and setup strings for the current session
Eliminate page breaks, headers, footers, and top and bottom margins when you print the range
/Print [E,F,P] Options
- ◆ Eliminate the blank lines 1-2-3 leaves at the top and bottom of a printed page
Print contents of each cell in the print range including the cell address, format, and protection status
/Print [E,F,P] Options Other
Unformatted
- ◆ Print worksheet frame with each print range
/Print [E,F,P] Options Borders Frame
- ◆ Select a color for a print range
/Print [E,P] Options Advanced Color
- ◆ Select fonts for the border, frame, header/footer, or print range
/Print [E,P] Options Advanced Fonts
- ◆ Select line spacing, orientation, and pitch
/Print [E,P] Options Advanced Layout
- ◆ Select the colors or hatch patterns for the data in a graph
/Graph Options Advanced Colors or Hatches
- ◆ Select the density, size, and orientation of a printed graph
/Print [E,P] Options Advanced Image
- ◆ Select the font, size, and color for the text in a graph
/Graph Options Advanced Text
- ◆ Set the order in which 1-2-3 prints each print job
/Print [P] Options Advanced Priority
- ◆ Tell 1-2-3 where to start printing a new page
/Worksheet Page

Setting Up 1-2-3 to Work with a Printer

- ◆ Select a printer for the current print job if you do not want to use the default printer
Select the default printer you want 1-2-3 to use from a list of printers you selected in Install
/Print Printer Options Advanced
Device Name
- ◆ Set the connection between your computer and your printer (parallel, serial, or output device) if different from the default setting
/Worksheet Global Default Printer
Name
- ◆ Set the connection between your computer and your printer (parallel, serial, or output device) if different from the default setting
/Print Printer Options Advanced
Device Interface

Set the default connection between your computer and your printer (parallel, serial, or output device)

/Worksheet Global Default Printer Interface

Starting and Stopping Printing

- ◆ Cancel all 1-2-3 print jobs
End the print job by closing the file if printing to a text or encoded file on disk
/Print Cancel
- ◆ Leave the /Print menu and return 1-2-3 to READY mode without closing the current print job so you can make changes to the worksheet and then continue the print job
/Print [E,F,P] Hold
- ◆ Print worksheets and graphs on a printer you selected in the Install program
/Print Printer Go
- ◆ Save data, graphs, and formatting codes in an encoded file to print later
/Print Encoded Go
- ◆ Save data in a text file for use with programs that can read text files
/Print File Go
- ◆ Temporarily halt and then resume printing
/Print Suspend and then /Print Resume

Viewing and Changing Print Settings

Change the default print settings that 1-2-3 automatically uses when you start 1-2-3

/Worksheet Global Default Printer

- ◆ Create, select, modify, and delete print settings names
/Print [E,F,P] Options Name
 - ◆ Display a list of the default print settings that 1-2-3 automatically uses when you start 1-2-3
/Worksheet Global Default Status
 - ◆ Print a sample page that shows you the current print settings and your printer's capabilities
/Print [E,F,P] Sample
 - ◆ Reset some or all of the current print settings to the default print settings
/Print [E,F,P] Clear
 - ◆ Reset the page counter to one and tell 1-2-3 to begin printing at the top of a page
/Print [E,F,P] Align
-

Protecting Data and Files

Protecting Data

When a file is in GROUP mode, /Worksheet Global Prot, /Range Prot, and /Range Unprot affect all worksheets in the file.

Display worksheet protection status	/Worksheet Status
Prevent or allow changes to data in a worksheet	/Worksheet Global Prot
Protect or unprotect cells in a range	/Range Prot or Unprot
Restrict cell-pointer movement to unprotected cells for data entry	/Range Input

Protecting Files

- ◆ Allow a user to read a file into memory but prevent changes to some graph, print, range, worksheet, and reservation settings /File Admin Seal
 - ◆ Prevent more than one person from simultaneously saving changes to a shared file /File Admin Reservation
See "Using Data Files on a Network" in Appendix 5 of *Reference*
 - Save a worksheet file with a password See /File Save in "File Commands" in Chapter 2 of *Reference*
-

Returning 1-2-3 to the Operating System

End a 1-2-3 session	/Quit
Suspend 1-2-3 to use the operating system	/System

Using Files

Copying Data Between Files

Add numbers from a worksheet file on disk to numbers in the current file	/File Combine Add
Copy data from a worksheet file on disk to the current file	/File Combine Copy
Copy data from one worksheet or file to another worksheet or file	/Copy

Subtract numbers in a worksheet file on disk from numbers in the current file

/File Combine Subtract

- ◆ Write formulas that refer to data in other files (link files)

See "Linking Files with Formulas" in Chapter 1 of *Reference*

Erasing Files

- ◆ Delete one file from memory
Erase a file on disk
- ◆ Remove all active worksheets and files from memory and replace them with one blank worksheet
Replace the current file with a file from disk

/Worksheet Delete File

/File Erase

/Worksheet Erase Yes

/File Retrieve

Reading Files from Disk into Memory

Change the current directory that 1-2-3 uses when you save, read, or list files

/File Dir

- ◆ Read a file from disk into memory before or after the current file
Read data from a text file into separate cells in the current worksheet
Read data from a text file into the current worksheet
Replace the current file with a file from disk
Set the default directory that 1-2-3 automatically uses to save, read, and list files when you begin a session

/File Open

/File Import Numbers with a delimited text file or /File Import Text and then /Data Parse

/File Import

/File Retrieve

/Worksheet Global Default Dir

Saving Files on Disk

- Save a graph in a file to use with another program
- Save a range of data, converting formulas to values, in a worksheet file on disk
- Save a range of data, including formulas, in a worksheet file on disk
- Save a worksheet file with a password
- ◆ Save data, graphs, and formatting codes in an encoded file

/Graph Save

/File Xtract Values

/File Xtract Formulas

See /File Save in Chapter 2 of *Reference*

/Print Encoded Go

Save data in a text file	/Print File Go
Save modified active files in files on disk	/File Save

Starting a New File

- ◆ Create a new worksheet file in memory /File New

Transferring Data Between 1-2-3 and Other Programs

Read data from a text file into separate cells in the current worksheet	/File Import Numbers with a delimited text file or /File Import Text and then /Data Parse
---	---

Save data in a text file for use with programs that can read text files	/Print File Go
---	----------------

Translate files with other file formats to and from 1-2-3 Release 3.1 format	See "Available Translation" in Appendix 1 of <i>Reference</i>
--	---

Using Multiple-Sheet Files

- ◆ Delete one or more worksheets from the current file /Worksheet Delete Sheet
 - ◆ Insert one or more worksheets in a file /Worksheet Insert Sheet
 - ◆ View three worksheets at one time /Worksheet Window Perspective
-

Using Macros

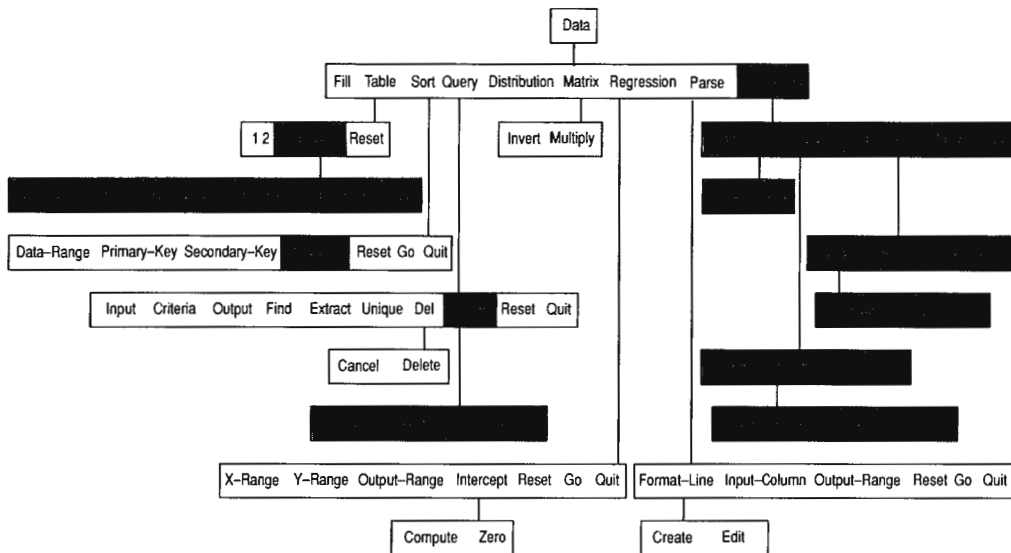
Create a macro to perform 1-2-3 tasks	See "Creating a Macro" in Chapter 4 of <i>Reference</i>
---------------------------------------	---

- ◆ Record 1-2-3 keystrokes to create a macro See "Using the Record Feature for Macros" in Chapter 4 of *Reference*
 - ◆ Run a macro as soon as 1-2-3 reads the file that contains the macro into memory /Worksheet Global Default Autoexec
 - ◆ Use the sample macro library See "Sample Macros" in Chapter 4 in *Reference*
-

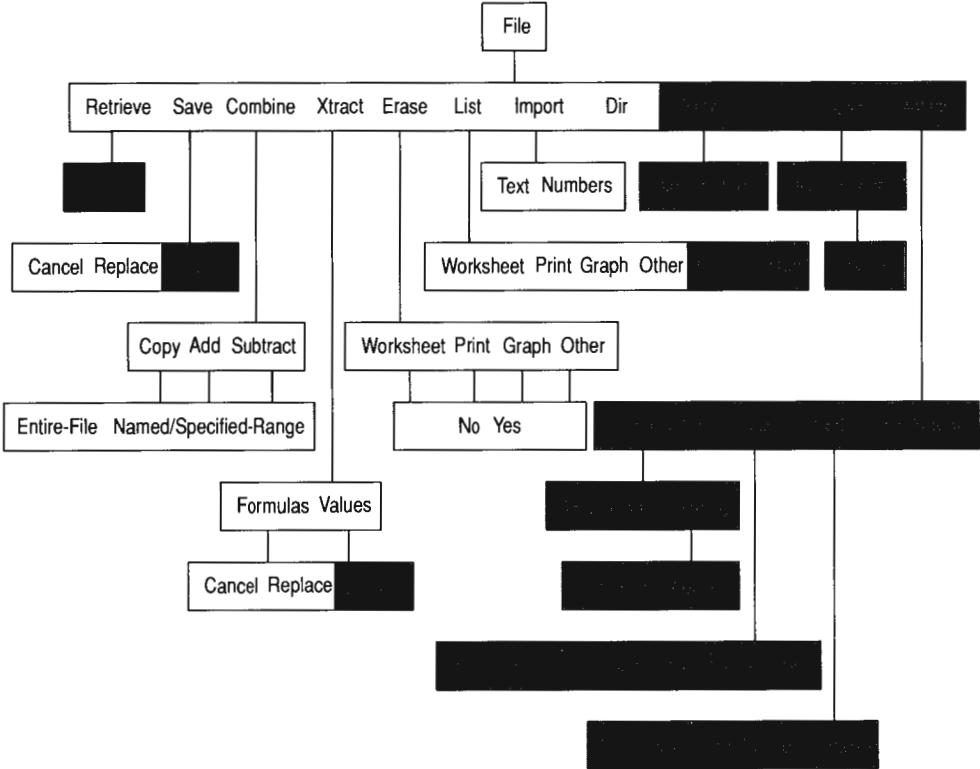
Menu Trees

This section contains menu trees for the Data, File, Graph, Print, Range, and Worksheet commands. These menu trees are the same as those that appear in Chapter 2 of *Reference*.

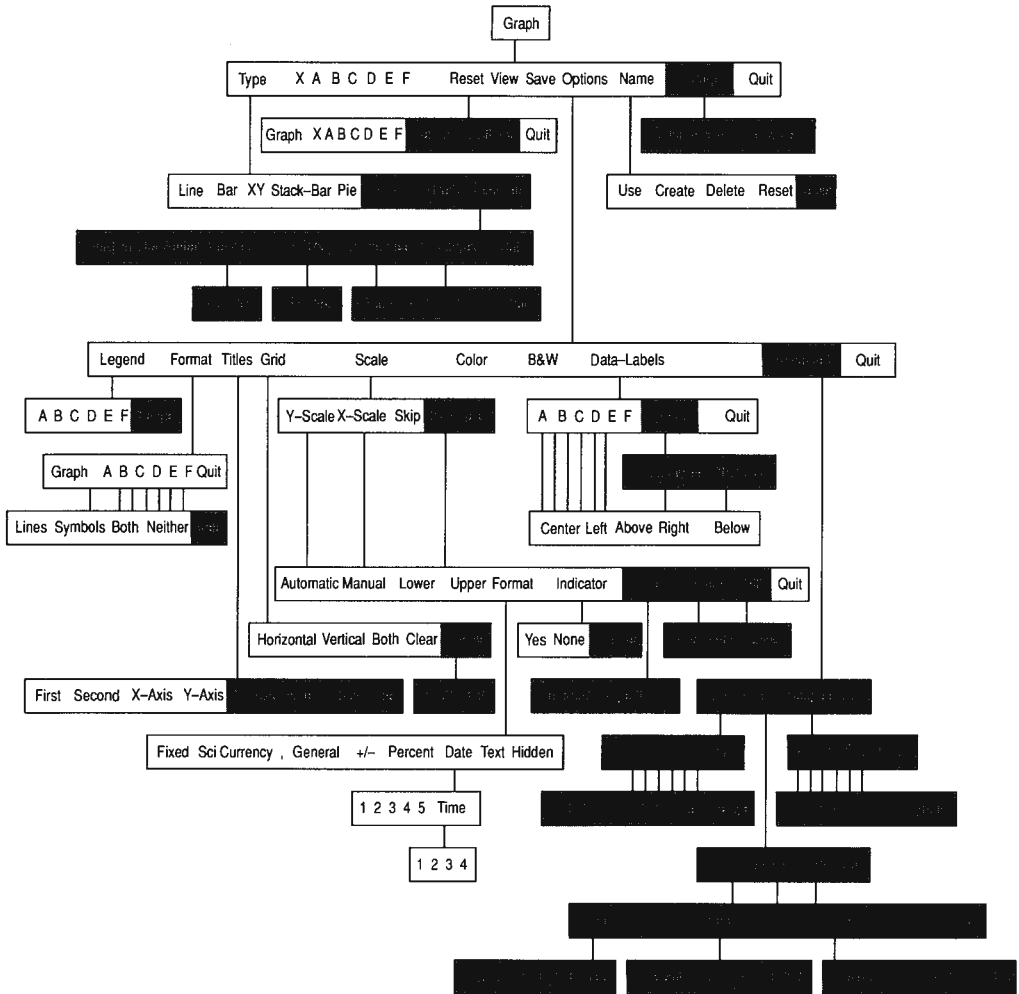
Data Commands



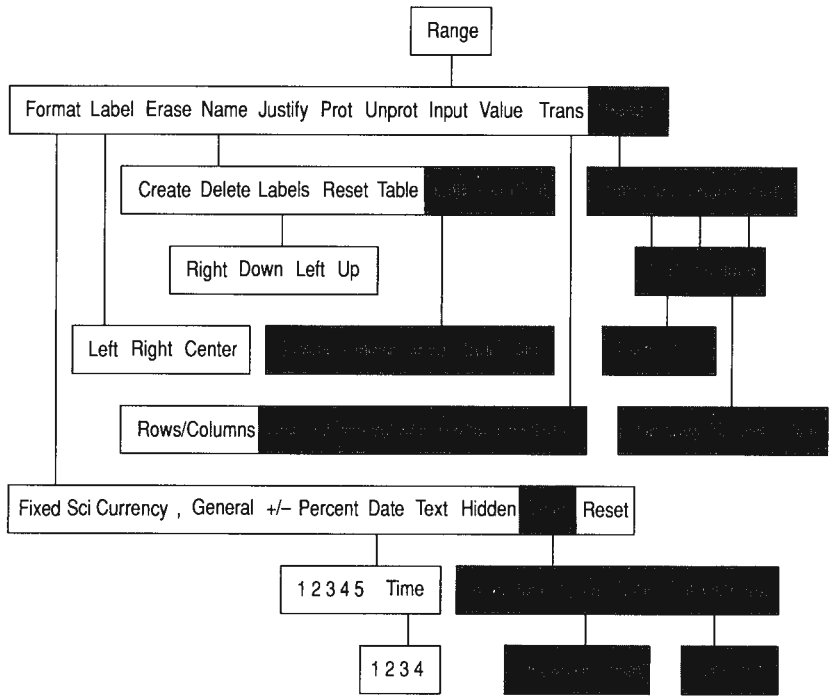
File Commands



Graph Commands



Range Commands



Worksheet Commands

